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Topic: Animal Partnerships Date: May 15, 2012

Grade Level: 4

Ohio State Standard: Life Sciences #5- Describe how organisms interact with one another in

various ways (e.g., many plants depend on animals for carrying pollen or dispersing seeds).

Objective: Students will be able to categorize a group of animals into the correct kind of symbiotic relationship- mutualism, parasitism, or commensualism.

Materials:

* Several copies of “How to Clean a Hippopotamus”
* Smart board /slide show
* Note cards with groups of animals on each and details about their relationships
* White board- divide into 3 columns- mutualism, parasitism, and commensualism
* Tape
* Quizzes for the following day

Procedure:

* Using the smart board, show the students a picture of a turtle and a hippopotamus. Discuss what they have in common and how they are different.
* Read them the page from “How to Clean a Hippopotamus” with the turtle and hippo.
* After reading, discuss that their relationship is called “mutualism” which is a kind of symbiotic relationship in which animals share. In a mutualism relationship, all the animals are helped. For example, the turtle cleans algae and water plants off the hippo. The hippo benefits because it gets all the unnecessary greenery off and the turtle gets a meal.
* Explain the other 2 kinds of symbiotic relationships that are mentioned in the book- parasitism (one animal benefits and another is harmed) and commensualism (one animal is helped and doesn’t hurt or help another).
* Activity- Students will divide into groups of 3. Each group will be given a note card with a set of 2-3 animals on it that share a kind of symbiotic relationship. The note card will also have a brief description of the relationship such as “the turtle cleans the greenery off the hippo.” Their job will be to figure out which kind of symbiotic relationship the animals have- mutualism, parasitism, or commensualism. They will need to be prepared to explain why they chose the relationship they did. \*Use the turtle and hippo as an example before starting the activity.
* Once everyone is done in their groups, get back together as a whole class. Each group will present their animals by reading their note card and tell what kind of relationship they have and why.
* On the white board, there will be 3 categories- mutualism, parasitism, and commensualism. When students are done presenting, they will tape their card under the correct category.

Differentiated Instruction: For students who cannot read fluently, provide them with a copy of the book where they can look at the pictures and decide which relationship they have.

Assessment: The students will take a quiz over this information the following day. They will be asked to explain what each kind of symbiotic relationship means and give an example for each one.